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A phase locked loop with reduced frequency/phase lock time.

A phase locked loop provides a programmable frequency output signal. A phase detector (18) detects a phase difference between a reference frequency (F_{REF}) divided by a first number (R), and a frequency of the output signal (F_{ROUT}) divided by a second number (N). First and second counters (14,16) receive the first and the second input numbers to divide a respective frequency. Whenever an input number is loaded, a load signal (JAM LOAD) resets the phase detector and causes each counter to be loaded, which reduces the lock time of the loop.

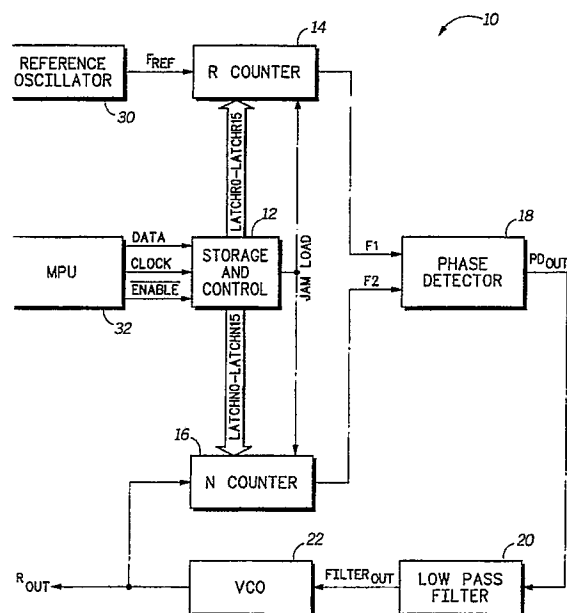


FIG. 1



European
Patent Office

EUROPEAN SEARCH REPORT

Application Number

EP 90 31 3927

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
Y	US-A-4 817 199 (WALLRAFF) * column 3, line 23 - line 33 ** column 3, line 62 - column 4, line 18; figures 3,4 *	1-8,10	H 03 L 7/199

Y	CH-A-6 700 20 (WILLI STUDER AG) * page 2, right column, line 56 - page 4, right column, line 63; figures 1-3 *	1-8,10	

Y	EP-A-0 272 938 (NIPPON TELEGRAPH AND TELEPHONE CORPORATION) * column 3, line 2 - line 15; figures 1,3,4,10 *	1,5,6,8,10	

Y	US-A-4 378 509 (HATCHETT ET AL.) * figure 3 *	3,4	

A	US-A-4 714 899 (KURTZMAN ET AL.) * column 1, line 57 - line 59; figures 1,2A *	1-8,10	

			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			H 03 L
The present search report has been drawn up for all claims			
Place of search		Date of completion of search	Examiner
The Hague		29 August 91	BALBINOT H.
CATEGORY OF CITED DOCUMENTS			
X: particularly relevant if taken alone		E: earlier patent document, but published on, or after the filing date	
Y: particularly relevant if combined with another document of the same category		D: document cited in the application	
A: technological background		L: document cited for other reasons	
O: non-written disclosure		-----	
P: intermediate document		&: member of the same patent family, corresponding document	
T: theory or principle underlying the invention			